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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/727,390	11/30/2000	John S. Thompson	B1034/7003 (GSE)	4131

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EXAMINER	
PALADINI, ALBERT WILLIAM	
ART UNIT	**PAPER NUMBER**
2125	7

DATE MAILED: 05/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/727,390	THOMPSON ET AL.	
	Examiner	Art Unit	
	Albert W Paladini	2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 November 2000*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 6.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-3 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Lines 13-14 on page 2 state, "Next, a model of a part to be measured is loaded into the simulated measurement system 102." The specification does not explain where this model is obtained. If the model is obtained from a database, which contains the design specification, then the physical characteristics of the model will be idealized and not actually represent a specific part which requires measurement. All parts will look alike under the measuring system. The specification must explain in detail how the model is obtained from the real physical part. The model of a physical part must have the same dimensions and physical properties of the physical part itself.

Appropriate correction and clarification is required.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

4. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01.

Claim 1

Line 3 recites "a computer executing a software program which receives a digital model of a part." There is no recitation of how this digital model is generated. If the model is generated from a database, which contains the design specification, then the physical characteristics of the model will be idealized and not actually represent a specific part which requires measurement. All parts will look alike under the measuring system. Since the measuring system provides only the idealized stored values of the part, which are known in advance, there is no purpose for making the measurement. The claim must recite the element or elements, which produce the model so that it is, understood how the model is obtained from the real physical part. The model of a physical part must have the same dimensions and physical properties of the physical part itself.

It is not understood what is meant by "the image rendered under conditions simulating a measurement system and which evaluates the image to produce a value representative of a physical characteristic of the part" in lines 4-5. How is an image "rendered under conditions simulating a measurement system?" Assuming that the rendering of the image is some sort of a three dimensional representation of a part, it is

not understood how the image of this part somehow simulates a measurement system. Also, it is not understood what evaluates the image.

Appropriate correction and clarification is required.

5. Claims 2-3 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01.

Claim 2

The preamble of the claim recites "a computer model of the physical part." In order for the measurement system to utilize this "a computer model of the physical part," for the basis of a real measurement of the part, steps are need to explain how this model is generated. There is no recitation of how this digital model is generated. If the model is generated from a database, which contains the design specification, then the physical characteristics of the model will be idealized and not actually represent a specific part which requires measurement. All parts will look alike under the measuring system. Since the measuring system provides only the idealized stored values of the part, which are known in advance, there is no purpose for making the measurement. The claim must recite the steps, which produce the model so that it is, understood how the model is obtained from the real physical part. The model of a physical part must have the same dimensions and physical properties of the physical part itself.

Claim 3

Lines 5-6 recite, "manipulating the simulated measurement system to produce a virtual observation of the computer model." There is not antecedent basis for "computer model." If this claim relates to the gleaned objective of performing a measurement on a part using a model, the claim must also recite how the model is obtained. It is not understood what a "virtual observation of the computer model" is. A measurement system obtains measurements of some object and does not produce an observation.

Appropriate correction and clarification is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Eino (5153721).

This rejection is made to the extent that the claims are understood by addressing what appears to be the objective of the invention and elements recited in the claims and by speculatively inferring how they might operate in concert to perform the objective.

Eino discloses an apparatus and method for simulating the measurement of a part by generating a two or three-dimensional image of the part which obtains the exact physical characteristics of the part, and then by performing a simulated measurement on the image. Eino states in column 2 lines 30-63 "According to the present invention, there is provided a method of measuring an object by employing an imaging means, comprising: an image displaying process wherein an image of an object whose overall shape and dimension are already known is obtained by means of an imaging means, and the image of the object is displayed, as an object image, on the screen of a monitor; a position specifying process wherein, after a simulating graphic form corresponding to the object is produced on three-dimensional coordinates on the basis of data on the known shape and dimension of the object, certain positions of the object image on the monitor to which a plurality of particular positions of the simulating graphic form should correspond, are specified; a graphic form attitude varying process wherein the attitude of the simulating graphic form is varied on the basis of data on those positions of the object image specified in the position specifying process in such a manner that the simulating graphic form produced on the basis of the data on the known shape and dimension of the object becomes substantially coincident with the object image on the monitor; a position determining process wherein a plurality of points forming a particular measurement portion of the object have their position on the object image on the monitor specified so that, on the basis of data on the specified position of the plurality of points, the position of a plurality of corresponding points of the simulating graphic form is determined; and a measuring process wherein, on the basis of data on that position on the simulating graphic form corresponding to the position of the plurality of points specified in the position determining process, a quantity which is the subject of measurement and which is defined by the plurality of points is measured."

Relevant Prior Art

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Croyle (5530652) discloses an automatic garment inspection system with a machine vision system that captures an image of the garment, translates the analog image signal into a digital image signal and analyzes the digital image signal. The machine vision system then sends this image to the system computer, which compares the dimensions of this image to the dimensions of an ideal image for this size of garment stored in the computer, and determines if this garment complies with the ideal image plus an allowable tolerance or deviation. If the dimensions of the garment are within the allowable tolerance of the dimensions of the ideal image then the garment is moved from an inspection station onto the exit conveyor where it is carried away from the inspection station. If the dimensions of the garment are not within the allowable tolerance of the dimensions of the ideal image then the garment is taken off the inspection station and discarded in the reject bin.

Buckley (6064759) discloses an automatic inspection method and apparatus, which obtains a geometric model of the object to be inspected and uses camera images of the objects to produce groups of points describing the structure. The system utilizes spatial averaging to obtain high accuracy.

Kase (6683985) discloses a method of forming a curved surface where the discrepancy of the forming item which is formed by a press work such as the body of an automobile or the like can be evaluated objectively and numerically from, for example, the actual measurement data or the accuracy of the numerical simulation can be evaluated objectively and numerically.

9. Any inquiry concerning this communication or earlier communication from the examiner should be direct to Albert W. Paladini whose telephone number is (703) 308-2005. The examiner can normally be reached from 7:30 to 3:30 PM on Monday, Tuesday, Thursday, and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Leo P. Picard, can be reached on (703) 308-0538. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Albert W. Paladini
Primary Examiner
Art Unit 2125

April 27, 2004